Title (en)

Mirror for laser processing

Title (de)

Spiegel zur Laserbearbeitung

Title (fr)

Miroir destiné au traitement par laser

Publication

EP 2065734 A1 20090603 (DE)

Application

EP 07023281 A 20071130

Priority

EP 07023281 A 20071130

Abstract (en)

The mirror has a carbonic substrate (2) that is provided with a reflective layer (1) e.g. metal or silicon layer, which reflects laser light (3). The substrate is formed by a metal connection with particle shaped carbon deposits. A size of diamond particle (5) amounts to 5 to 300 micro meters. The substrate has a thickness of 1 to 10 millimeters, and comprises a metal layer (6) at a side turned away from the reflective layer. A metal matrix (4) consists of element selected from a group consisting of IIIb, IVb, Vb, VIb, transition metals, silicon or boron. An independent claim is also included for a method for manufacturing a mirror.

Abstract (de)

Ein Spiegel zur Laserbearbeitung besteht aus einem Substrat (2) aus einem Metall-Kohlenstoff-Verbund, das mit einer reflektierenden Schicht (1) versehen ist. Der Kohlenstoff (5) in der Metallmatrix (4) des Substrats (2) besteht vorzugsweise aus Diamant.

IPC 8 full level

G02B 1/00 (2006.01); **G02B 5/08** (2006.01)

CPC (source: EP)

G02B 1/00 (2013.01); **G02B 5/0808** (2013.01)

Citation (applicant)

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- DE 10339220 B4 20060810 - HITACHI VIA MECHANICS LTD [JP]
- WO 2006046078 A1 20060504 - BAE SYSTEMS PLC [GB], et al
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Citation (search report)

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- [A] US 5045972 A 19910903 - SUPAN EDWARD C [US], et al
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- [DA] WO 2004080913 A1 20040923 - PLANSEE AG [AT], et al
- [A] US 5273790 A 19931228 - HERB JOHN A [US], et al
- [X] MOHN W R ET AL: "RECENT APPLICATIONS OF METAL MATRIX COMPOSITES IN PRECISION INSTRUMENTS AND OPTICAL SYSTEMS", OPTICAL ENGINEERING, SOC. OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS. BELLINGHAM, US, vol. 27, no. 2, 1 February 1988 (1988-02-01), pages 90 - 98, XP000005671, ISSN: 0091-3286
- [A] EALEY M A: "Large optics in the 21st century: a transition from discrete manufacturing to highly integrated techniques", AEROSPACE CONFERENCE, 2003. PROCEEDINGS. 2003 IEEE MARCH 8-15, 2003, PISCATAWAY, NJ, USA,IEEE, vol. 4, 8 March 2003 (2003-03-08), pages 1705 - 1716, XP002317937, ISBN: 978-0-7803-7651-9

Citation (examination)

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

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DOCDB simple family (application)

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